

GWF - Hourly Construction Equipment Emissions

Carbon Monoxide

Pounds Per Hour

1	2	3	4	5	6	7	8	9
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Sitework (Earthwork and Civil)

Backhoe, 1.0 Cy
 Front End Loader, 2 Cyd
 Grader, 200 Hp 14 Ft
 Vibratory Plate (hand held)
 Rammer/Jumping Jack (hand held)
 Riding Vibratory Compactor
 Asphalt Paver
 Asphalt Cutter/Grinder
 Asphalt Compactor, Tandem Steel Drum Roller

1.3	1.3	1.3	1.3	1.3	1.3	0.0	0.0	0.0
0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.1	5.1	5.1	5.1	5.1	5.1	5.1	0.0	0.0
5.1	5.1	5.1	5.1	5.1	5.1	5.1	0.0	0.0
0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2

Erection Support Equipment

Air Compressor, 185 CFM
 Air Compressor, 185 CFM
 Concrete Pump
 Scissors Lift
 JLG 60 Ft
 JLG 60 Ft
 JLG 60 Ft
 Forklift Extended Boom
 Crane 110 Ton
 Hydraulic Truck Crane 55 Ton
 Hydraulic Truck Crane 55 Ton
 Hydraulic Truck Crane 35 Ton
 Hydraulic Truck Crane 22 Ton
 Hydraulic Truck Crane 22 Ton
 7000 Watt Portable Generator
 Welder - Miller 400d
 Welder - Miller 400d
 Highway Tractor
 Flat Bed Truck w/ Rails
 Water Truck

0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
0.0	0.0	0.5	0.5	0.5	0.5	0.0	0.0	0.0
0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0
0.0	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0
0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0
0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.0	0.0
0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.7	0.7	0.7	0.7	0.0	0.0	0.0
1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.0
0.0	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0
0.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.0
1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0
6.8	6.8	6.8	6.8	6.8	6.8	0.0	0.0	0.0
0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.0
0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0
0.0	6.8	6.8	6.8	6.8	6.8	6.8	0.0	0.0
0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0
11.7	11.8	11.8	11.7	11.7	11.7	10.3	0.0	1.0
11.0	21.3	23.3	23.7	24.0	22.8	12.8	4.6	2.1

Sitework (Earthwork and Civil) lbs/hr:

Erection Support Equipment lbs/hr:

GWF - Hourly Construction Equipment Emissions

Reactive Organic Compounds

Pounds Per Hour

1	2	3	4	5	6	7	8	9
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Sitework (Earthwork and Civil)

Backhoe, 1.0 Cy
 Front End Loader, 2 Cyd
 Grader, 200 Hp 14 Ft
 Vibratory Plate (hand held)
 Rammer/Jumping Jack (hand held)
 Riding Vibratory Compactor
 Asphalt Paver
 Asphalt Cutter/Grinder
 Asphalt Compactor, Tandem Steel Drum Roller

0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0
0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Erection Support Equipment

Air Compressor, 185 CFM
 Air Compressor, 185 CFM
 Concrete Pump
 Scissors Lift
 JLG 60 Ft
 JLG 60 Ft
 JLG 60 Ft
 Forklift Extended Boom
 Crane 110 Ton
 Hydraulic Truck Crane 55 Ton
 Hydraulic Truck Crane 55 Ton
 Hydraulic Truck Crane 35 Ton
 Hydraulic Truck Crane 22 Ton
 Hydraulic Truck Crane 22 Ton
 7000 Watt Portable Generator
 Welder - Miller 400d
 Welder - Miller 400d
 Highway Tractor
 Flat Bed Truck w/ Rails
 Water Truck

0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0
0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0
0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0
0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
0.5	0.5	0.5	0.5	0.5	0.5	0.3	0.0	0.2
0.8	1.5	1.9	2.0	1.9	1.8	1.2	0.7	0.3

Sitework (Earthwork and Civil) lbs/hr:

Erection Support Equipment lbs/hr:

GWF - Hourly Construction Equipment Emissions

Nitrogen Oxides

Pounds Per Hour

1	2	3	4	5	6	7	8	9
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Sitework (Earthwork and Civil)

Backhoe, 1.0 Cy
 Front End Loader, 2 Cyd
 Grader, 200 Hp 14 Ft
 Vibratory Plate (hand held)
 Rammer/Jumping Jack (hand held)
 Riding Vibratory Compactor
 Asphalt Paver
 Asphalt Cutter/Grinder
 Asphalt Compactor, Tandem Steel Drum Roller

0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0
0.7	0.7	0.7	0.7	0.7	0.7	0.0	0.0	0.0
0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5

Erection Support Equipment

Air Compressor, 185 CFM
 Air Compressor, 185 CFM
 Concrete Pump
 Scissors Lift
 JLG 60 Ft
 JLG 60 Ft
 JLG 60 Ft
 Forklift Extended Boom
 Crane 110 Ton
 Hydraulic Truck Crane 55 Ton
 Hydraulic Truck Crane 55 Ton
 Hydraulic Truck Crane 35 Ton
 Hydraulic Truck Crane 22 Ton
 Hydraulic Truck Crane 22 Ton
 7000 Watt Portable Generator
 Welder - Miller 400d
 Welder - Miller 400d
 Highway Tractor
 Flat Bed Truck w/ Rails
 Water Truck

1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
0.0	0.0	1.3	1.3	1.3	1.3	0.0	0.0	0.0
1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
0.0	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0
0.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.0
0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.0	0.0
0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.0	0.0
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.0	0.0	1.7	1.7	1.7	1.7	0.0	0.0	0.0
2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0
0.0	2.5	2.5	2.5	2.5	2.5	0.0	0.0	0.0
0.0	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0
2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0
0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0
0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
0.0	0.0	1.2	1.2	1.2	1.2	1.2	0.0	0.0
0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0
0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0
2.1	2.1	2.1	2.1	2.1	2.1	0.0	0.0	0.0
1.5	1.9	1.9	1.5	1.5	1.5	0.4	0.0	2.6
10.2	18.6	23.6	24.4	25.1	22.2	14.5	10.9	5.1

Sitework (Earthwork and Civil) lbs/hr:

Erection Support Equipment lbs/hr:

GWF - Hourly Construction Equipment Emissions

Sulfur Dioxide

Pounds Per Hour

1	2	3	4	5	6	7	8	9
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Sitework (Earthwork and Civil)

Backhoe, 1.0 Cy
 Front End Loader, 2 Cyd
 Grader, 200 Hp 14 Ft
 Vibratory Plate (hand held)
 Rammer/Jumping Jack (hand held)
 Riding Vibratory Compactor
 Asphalt Paver
 Asphalt Cutter/Grinder
 Asphalt Compactor, Tandem Steel Drum Roller

0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Erection Support Equipment

Air Compressor, 185 CFM
 Air Compressor, 185 CFM
 Concrete Pump
 Scissors Lift
 JLG 60 Ft
 JLG 60 Ft
 JLG 60 Ft
 Forklift Extended Boom
 Crane 110 Ton
 Hydraulic Truck Crane 55 Ton
 Hydraulic Truck Crane 55 Ton
 Hydraulic Truck Crane 35 Ton
 Hydraulic Truck Crane 22 Ton
 Hydraulic Truck Crane 22 Ton
 7000 Watt Portable Generator
 Welder - Miller 400d
 Welder - Miller 400d
 Highway Tractor
 Flat Bed Truck w/ Rails
 Water Truck

0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0
0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0
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0.0	0.0	0.2	0.2	0.2	0.2	0.0	0.0	0.0
0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0
0.0	0.3	0.3	0.3	0.3	0.3	0.0	0.0	0.0
0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0
0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0
0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.2
1.0	1.8	2.3	2.4	2.5	2.2	1.4	1.1	0.5

Sitework (Earthwork and Civil) lbs/hr:

Erection Support Equipment lbs/hr:

GWF - Hourly Construction Equipment Emissions

Particulate Matter <10um

Pounds Per Hour

1	2	3	4	5	6	7	8	9
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Sitework (Earthwork and Civil)

Backhoe, 1.0 Cy
 Front End Loader, 2 Cyd
 Grader, 200 Hp 14 Ft
 Vibratory Plate (hand held)
 Rammer/Jumping Jack (hand held)
 Riding Vibratory Compactor
 Asphalt Paver
 Asphalt Cutter/Grinder
 Asphalt Compactor, Tandem Steel Drum Roller

0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Erection Support Equipment

Air Compressor, 185 CFM
 Air Compressor, 185 CFM
 Concrete Pump
 Scissors Lift
 JLG 60 Ft
 JLG 60 Ft
 JLG 60 Ft
 Forklift Extended Boom
 Crane 110 Ton
 Hydraulic Truck Crane 55 Ton
 Hydraulic Truck Crane 55 Ton
 Hydraulic Truck Crane 35 Ton
 Hydraulic Truck Crane 22 Ton
 Hydraulic Truck Crane 22 Ton
 7000 Watt Portable Generator
 Welder - Miller 400d
 Welder - Miller 400d
 Highway Tractor
 Flat Bed Truck w/ Rails
 Water Truck

0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0
0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0					